

Appln No. 10/665,839

Amdt date May 5, 2005

Reply to Office action of February 22, 2004

REMARKS/ARGUMENTS

Claims 1-22 are in this application. Claims 18-22 have been allowed. The rest of the claims were rejected under 35 USC § 102 or § 103, with the principal reference relied on being a patent by Wecke. The structure in the Wecke patent has a different type of electrical connection from the insulation displacement connector described and claimed in this application. Some of the independent claims have been amended to emphasize the distinction and are submitted to now be allowable since the claimed structure is not anticipated what is shown by Wecke. Some additional amendments have been made in some claims to expedite allowance of this application.

This invention concerns a switch in which an insulating housing contains an insulation displacement connector (actually two such IDCs in the illustrated embodiment). An insulation displacement connector is such a well-recognized type of electrical connector that has its own acronym, IDC, and it is named as such in some of the patents cited by the Examiner in this application. See, for example, Patent No. 5,435,747 (col. 5, lines 58-60); Patent No. 5,541,376 (col. 6, lines 7-8 and lines 52-57); and Patent No. 6,312,282 (col. 1, lines 5 and 6, and lines 14-24). IDC connectors are also illustrated and explained in the enclosed Electus Distribution Reference Data Sheet.

An IDC is a type of electrical connector having tines with a slot therebetween into which an insulated electrical wire is pressed. The tines along the edges of the slot are parallel or may have slight convergence. When a wire is pressed into the

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slot, insulation is displaced from opposite edges of the wire and electrical contact is made between the tines and wire.

The Examiner has characterized the connector in the Wecke patent as an "insulation displacement connector". This is not correct. The connector described and illustrated by Wecke is a different type of connector known as an insulation piercing connector or IPC. Enclosed herewith are four descriptions of insulation piercing connectors currently found on the internet. In each of these, the blade, spike or needle pierces through insulation on a wire and stabs into the wire itself to make electrical contact. Although not named IPC in the Wecke patent, it is stated that "the terminals 6 are destined to penetrate the sheath [insulation] 24 of the flat cable 4, when the lid 2 is closed, for contact with the conductors [wires] 7, 8, respectively, of the cable 4." (col. 3, lines 14-17)

Applicant's claims recite an insulation displacement connector rather than an insulation piercing connector. The difference has been emphasized in claims 5 and 8, by stating that the insulation displacement connector displaces insulation from opposite sides of the wire. Clearly, it is inappropriate to reject such claims, and the claims dependent from them, under 35 USC § 102 since the Wecke patent does not have an insulation displacement connector.

This is not considered to be a narrowing amendment in any of the claims since it simply states in additional words, an insulation displacement connector, which is already expressly recited in the claims.

Appln No. 10/665,839

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Applicant's claims 1-4 were rejected under 35 USC § 102 on the basis of the Wecke patent. These claims recite an insulated flap hinged to the body of the switch, the flap being rotatable between an open position and closed position and further including a catch position therebetween. The Examiner has taken the position that since there is a continuous range of rotation illustrated by the Wecke patent, there must be a "catch position" between open and closed positions. In Applicant's structure, when the flap reaches the catch position, it does not rotate back toward the open position and thereby temporarily holds the wires in position. Applicant's claims have been amended to specifically recite that in the catch position, the flap does not rotate back towards the open position. Certainly, there is no structure of that sort shown or suggested by Wecke and these claims should be allowed.

The Examiner rejected claim 5 under 35 USC § 102 as anticipated by the Wecke reference. This claim recites that the axis of the hinge between the insulating flap and the switch body is parallel to a wire in the switch body. All the Examiner says in that regard is to see the drawing in FIG. 1 of the Wecke patent. One should look instead at FIG. 2 where it is clearly seen that the axis about which the flap can rotate is perpendicular to the wires 4 entering the connector." Thus, the rejection under 35 USC § 102 is clearly incorrect. A similar recitation has been added in claim 14. Thus, claims 5-7 and 14 should be allowed.

Although claims 12 and 13 were rejected under 35 USC § 102, the Examiner has made no comment as to where in the Wecke patent

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some of the recited structure is shown. These claims recite that there is a hook on the connector portion of the switch body with first and second shoulders on the flap for engaging the hook in first and second positions. Nothing of this sort is shown or suggested by Wecke. As close as this reference comes to a hook is a "locking lug 13" illustrated in FIG. 2. As stated in the description, "the lid 2 has a free hinge-distal end face which is formed with a locking lug 13 for locked engagement behind a shoulder 14 of the casing 1, when the lid 2 is closed." The locking lug is the only structure in the Wecke patent which could be considered to be a "hook." However, there is a single shoulder 14 against which the hook may be engaged and no second shoulder as recited in Applicant's claims. Thus, the rejection of claims 12 and 13 should be withdrawn.

Claims 16 and 17 were rejected under 25 USC § 103 on the basis of the Wecke patent in view of a patent issued to Maney. The Examiner states that Maney "teaches a keyhole shape opening connector." The Maney patent does not have an insulation displacement connector and there is no keyhole shaped opening. The connector portion in this reference is best illustrated in FIGs. 7 and 8. As clearly seen in these drawings, there is a triangular hole in which a wire is laid sort of diagonally. Maney characterizes this as a "V-shaped opening." As stated in the description, "each of the wires 22, 24 is inserted into the V-shaped opening in the corresponding terminal 16, 18. The wire 24 engages the sharp point in the V-shaped opening and establishes electrical communication therewith." It is further apparent that this is not an insulation displacement connector

Appln No. 10/665,839

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since in both FIGs. 7 and 8, the electrical insulation has already been stripped from the end of the wire and only the bare wire end is inserted into the V-shaped opening. Since Maney does not disclose or suggest any kind of a connector which displaces insulation from wire pressed into a slot between tines and the triangular opening is not "keyhole shaped", it cannot make obvious the subject matter clearly recited in claims 16 and 17. Allowance of these claims is therefore appropriate.

Claims 1-22 remain in this application. Claims 18-22 were allowed. Applicant has pointed in detail how the balance of the claims provide clear distinctions from anything shown or suggested in the prior art, and these claims are also submitted to be in condition for allowance. Reconsideration, reexamination and allowance of this application are respectively requested.

Respectfully submitted,

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